

WHO/ACMR 78

DATE: May 24, 1976

To : Joshua Lederberg

FROM : Paul F. Basch *Paul*

SUBJECT: Further comments on Gus Nossal's working paper on basic biomedical research

Further to my memo of May 21, there is another point that I should have made. I assume that the WHO panels on research needs and on the tropical diseases program are more concerned with questions of policy than with the technical details of the actual research projects to be undertaken. This being so, then it is necessary to establish a basis for making decisions on research needs, and I think that such a basis will depend upon a set of ranked priorities that need to be agreed upon at an early stage. It is likely that these priorities will differ from one tropical disease to another, and from place to place. To maintain stability and flexibility I think the priorities should be reviewed at 5-year intervals. An example of such ranked priorities might be:

- I. Primary Prevention
 - A. Interruption of transmission
 - B. Abortion of infection
- II. Secondary Prevention: Reduction of effects of the illness
- III. Treatment and Rehabilitation of Established Cases

Methodologies for IA, for instance, might include vector control, destruction of reservoir hosts, screening, sanitation, environmental modification or whatever. Under vector control, in turn, can be listed biological control, pesticing, genetic manipulation, sterile male release, or other means. An overall targeted goal could be reduction of transmission below a predetermined "break-point". Methodologies for IB would include chemoprophylaxis, immunoprophylaxis, low-level continuous chemotherapy, or others. It can be agreed that IA is in general preferable to IB; where IA is considered unattainable by current or anticipated methods, more effort would be allocated to items lower in priority but judged to be more readily achieved. For instance, if a vaccine is just around the corner work can be directed towards its development.

Assessments must be made of costs, time, amount of research needed and likelihood of success, available manpower and materials, and ability of local health services to apply and evaluate the methods developed. In some instances treatment of existing cases can both reduce severe morbidity (as in blindness of onchocerciasis) and help in interruption of transmission; then more effort should be put on chemotherapy if that field seems pregnant. The problems in all six of the targeted tropical diseases, and in many others such as soil-transmitted helminthiasis, are immense. Ideally all aspects should be tackled simultaneously. In view of practical constraints, even if current funding should increase tenfold, decisions on research directions must be made and it seems essential that the WHO panels establish a set of priorities for guidance in making these decisions. For this reason the kinds of possible projects listed in Gus Nossal's draft proposal cannot be realistically evaluated for relevance and practicality unless measured against such a yardstick. The basic research will then become applied research, and the goals will mandate the technologies to be used, not the reverse.